May 15, 2003

Jerry L. Hill
Fountaintown Forge, Inc.
P. O. Box 139
Fountaintown, IN 46130-0139

Re: Exempt Construction and Operation Status
059-16878-00031

Dear Mr. Hill:

Fountaintown Forge, Inc. was issued an exemption letter, 059-16502-00031, on February 24, 2003 for a forged part manufacturing plant located at 5513 South 100 East, Fountaintown, IN 46130-9441. On March 7, 2003, the Office of Air Quality (OAQ) received a request from the Office of Enforcement (OE). The request was made to include fuel combustion units that were discovered during a inspection on October 25, 2002 but not mentioned in the exemption letter.

Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that your emission source remains classified as exempt from air pollution permit requirements. The emission source consists of the following emission units:

(a) One (1) natural gas fired boiler, rated at approximately 4.5 million Btu per hour, installed in 1953, identified as the "old" boiler.
(b) One (1) natural gas fired boiler, rated at 12.6 million Btu per hour, installed in 1998, identified as the "new" boiler.
(c) One (1) natural gas fired forge furnace, rated less than 2.0 million Btu per hour, identified as #101.
(d) One (1) natural gas fired forge furnace, rated at 2.0 million Btu per hour, identified as #102.
(e) Eight (8) natural gas fired space heaters, totaling less than 1.2 million Btu per hour.
(f) Two (2) open-die steam-driven forging hammers.
(g) Metal cutting and machining operations.
(h) Marking operations, using hand held spray cans to place identifying marks on steel material.
(i) Enclosed abrasive basting operations.
(j) One (1) gasoline storage tank, with a capacity of 550 gallons.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 6-2-2, particulate matter (PM) emissions from the natural gas fired boiler rated at 4.5 million Btu per hour shall not exceed 0.60 pounds per million British thermal units of heat input.

2. Pursuant to 326 IAC 6-2-4, particulate matter (PM) emissions from the natural gas fired boiler rated at 12.6 million Btu per hour shall not exceed 0.52 pounds per million British thermal units of heat input.

3. Pursuant to the New Source Performance Standards (NSPS), Part 60.48c, Subpart Dc, the Permittee is hereby advised of the requirement to report the following at the appropriate times for the natural gas fired boiler rated at 12.6 million Btu per hour:

(a) Commencement of construction date (no later than 30 days after such date).

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date).

(c) Actual start-up date (within 15 days after such date).

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

4. Pursuant to 40 CFR 48c(g), the applicant shall record and maintain records of the amounts of each fuel combusted during each day, unless U.S. EPA modifies this requirement via authority in 40 CFR 60.13(i), for the natural gas fired boiler rated at 12.6 million Btu per hour. Records shall be kept for a minimum period of two (2) years after such record is made.

5. Pursuant to 326 IAC 6-3-2(e), the particulate matter emissions from metal cutting, machining, forging and abrasive blasting operations shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

For a process weight rate of 100 pounds per hour, this equation provides an emission limit of 0.551 pounds per hour.

6. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

7. Records shall be made and kept of the amount of paint used by the marking operations (quantity of cans used, net weight, and MSDS from the manufacturer showing VOC content). These records are needed to ensure that actual volatile organic compound (VOC) emissions are less than 15 pounds per day before controls, and that actual coating usage is less than five (5) gallons per day, rendering 326 IAC 6-3-2 and 326 IAC 8-2-9 as not applicable.

This exemption letter is the second air approval issued to this emission source. Exemption 059-16502-00031, issued on February 24, 2003, is now considered obsolete as it has been included in this exemption letter. An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Any change or modification which may increase the potential emissions of particulate matter to five (5) tons per year or more from the emission source, increase the potential emissions of nitrogen oxides to ten (10) tons per year or more from the emission source, increase the volatile organic compound (VOC) emissions to fifteen (15) pounds per day or more from the marking operations, or increase actual paint usage to five (5) gallons per day or more from the marking operations, must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ARD

cc: File - Hancock County
Hancock County Health Department
Air Compliance Section Inspector - D. J. Knotts
Compliance Data Section - Karen Nowak
Technical Support and Modeling - Michele Boner
Permit Tracking

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	**Fountaintown Forge, Inc.**
Source Location:	**5513 South 100 East, Fountaintown, IN 46130-9441**
County:	**Hancock**
SIC Code:	**3462**
Application No.:	**059-16878-00031**
Permit Reviewer:	**Allen R. Davidson**

On March 7, 2003, the Office of Air Quality (OAQ) received a request from the Office of Enforcement (OE) relating to Fountaintown Forge, Inc., a forged part manufacturing plant located at 5513 South 100 East, Fountaintown, IN 46130-9441. The request was made to include the following fuel combustion units that were discovered during an inspection on October 25, 2002 but not mentioned in a previous exemption letter:

(a) One (1) natural gas fired boiler, rated at approximately 4.5 million Btu per hour, installed in 1953, identified as the "old" boiler.
(b) One (1) natural gas fired forge furnace, rated less than 2.0 million Btu per hour, identified as #101.
(c) Two (2) natural gas fired space heaters, totaling less than 0.34 million Btu per hour.
(d) One (1) gasoline storage tank, with a capacity of 550 gallons.

History

Fountaintown Forge, Inc. submitted an application for a registration for a forged part manufacturing plant (059-12835-00031) on October 11, 2000. However, the application was denied on January 22, 2002 due to failure to respond to a Notice of Deficiency.

The company resubmitted the previous application on November 25, 2002, along with additional information. An exemption letter was issued on February 24, 2003. That exemption included the following equipment:

(a) One (1) natural gas fired boiler, rated at 12.6 million Btu per hour.
(b) One (1) natural gas fired forge furnace, rated at 2.0 million Btu per hour.
(c) Four (4) natural gas fired space heaters, each rated at 0.2 million Btu per hour
(d) Two (2) natural gas fired space heaters, each rated at 0.03 million Btu per hour.
(e) Two (2) open-die steam-driven forging hammers.
(f) Metal cutting and machining operations.
(g) Marking operations, using hand held spray cans to place identifying marks on steel material.
(h) Enclosed abrasive blasting operations.

This application, if approved, will be the second air approval issued to the emission source.

Enforcement Issues

The source was referred to the Office of Enforcement on April 29, 2002 after an inspection revealed that the emission source was in operation. The Office of Enforcement has not yet acted on the referral.

Recommendation

The staff recommends to the Commissioner that the emission source be issued an exemption letter. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 7, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (2 pages)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential To Emit (tons/year)
PM	3.1
PM-10	3.1
SO_2	0.1
VOC	6.8
CO	8.2
NO_X	9.8

HAP's	Potential To Emit (tons/year)
TOTAL	negligible

The potential to emit (as defined in 326 IAC 2-7-1(29)) particulate matter (PM) is less than five tons per year and the potential to emit nitrogen oxides (NOX) is less than ten tons per year. Therefore, the source does not require review under 326 IAC 2-5.1 and can be classified as exempt under 326 IAC 2-1.1-3.

This source is not a major source for Prevention of Significant Deterioration, 326 IAC 2-2. No attainment regulated pollutant has the potential to emit at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

County Attainment Status

The source is located in Hancock County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Hancock County has been designated as attainment or unclassifiable for ozone and for all other pollutants. Therefore, emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

The 12.6 million Btu per hour natural gas-fired boiler, constructed in 1998, is subject to the requirements of the New Source Performance Standards, 326 IAC 12 (40 CFR 60, Subpart Dc) since it is rated greater than 10 million British thermal units of heat input. This standard places no emission limits on the new boiler, but it does require reporting of various dates and keeping of fuel usage records.

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to the gasoline storage tank or to the 4.5 million Btu per hour natural gas-fired boiler. Their sizes are smaller than the applicability thresholds of Subpart Kb and Dc, respectively.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source does not have potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it does not have the potential to emit more than one hundred (100) tons per year of any pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Old Natural Gas Fired Boiler

326 IAC 6-2 (Particulate Emission Limitations For Sources of Indirect Heating)

This facility is subject to 326 IAC 6-2-2. Pursuant to 326 IAC 6-2-2, particulate matter (PM) emissions from existing indirect heating facilities located in Hancock County which were existing and in operation prior to September 21, 1983 shall be limited by the following equation:

$$Pt = \frac{0.87}{Q^{0.16}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity rating on June 8, 1972 in million Btu per hour (MMBtu/hr) heat input.

For Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 pounds per million British thermal units of heat input. See Appendix A for detailed calculations. (2 pages)

326 IAC 12 (New Source Performance Standards)

This facility is not subject to 326 IAC 12 since it is rated less than 10 million British thermal units of heat input.

State Rule Applicability - New Natural Gas Fired Boiler

326 IAC 6-2 (Particulate Emission Limitations For Sources of Indirect Heating)

This facility is subject to 326 IAC 6-2-4. Pursuant to 326 IAC 6-2-4, particulate matter (PM) emissions shall be limited by an equation which provides a limit of 0.52 pounds per million British thermal units of heat input. See Appendix A for detailed calculations. (2 pages)

326 IAC 12 (New Source Performance Standards)

Pursuant to the New Source Performance Standards (NSPS), Part 60.48c, Subpart Dc, the Permittee is required to report the following at the appropriate times:

(a) Commencement of construction date (no later than 30 days after such date).

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date).

(c) Actual start-up date (within 15 days after such date).

Pursuant to 40 CFR 48c(g), the applicant shall record and maintain records of the amounts of each fuel combusted during each day.

The requirements of the New Source Performance Standards (NSPS), Part 60.48c(g), Subpart Dc, may be altered by the U.S. EPA via authority in 40 CFR 60.13(i). If the applicant desires to change the frequency from daily recording to monthly recording, the applicant must send a request to the following address:

George Czerniak
c/o United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Any such request should reference both NSPS requirement 40 CFR 48c(g) and the February 20, 1992 EPA memo from John Rasnic to Jewell Harper.

Pursuant to 40 CFR 48c(i), records shall be kept for a minimum period of two (2) years after such record is made.

State Rule Applicability - Natural Gas Fired Heaters

There are no state rules applicable to these facilities.

State Rule Applicability - Marking Operation

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

This facility is not subject to 326 IAC 8-2-9. Pursuant to 326 IAC 8-2-1 (Applicability), the rule is not applicable since the volatile organic compound (VOC) emissions are less than 15 pounds per day before controls.

326 IAC 6-3-2 (Particulate Emissions Limitations)

Pursuant to 326 IAC 6-3-1(b)(15), this facility is exempt from 326 IAC 6-3-2 since actual coating usage is less than five (5) gallons per day.

State Rule Applicability - Metal Cutting, Machining, Forging, and Abrasive Blasting Operations

326 IAC 6-3-2 (Particulate Emissions Limitations)

This emission unit is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

For a process weight rate of 100 pounds per hour, this equation provides an emission limit of 0.551 pounds per hour.

State Rule Applicability - 550 Gallon Gasoline Storage Tank

326 IAC 8-4-3 (Petroleum liquid storage facilities)

This facility is not subject to 326 IAC 8-4-3 since the liquid storage vessel has a capacity less than 150,000 liters (39,625 gallons).

Conclusion

The operation of these facilities shall be subject to the conditions of the attached exemption letter, No. 059-16878-00031.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Fountaintown Forge, Inc.
Address City IN Zip: 5513 South 100 East, Fountaintown, IN 46130
ID: 059-16878-00031
Reviewer: Allen R. Davidson
Date: 12/19/02

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
22.300	195.3

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.7	0.1	9.8	0.5	8.2

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.051E-04	1.172E-04	7.326E-03	1.758E-01	3.321E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.884E-05	1.074E-04	1.367E-04	3.712E-05	2.051E-04

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98).
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors confirm that the correct factor is used (i.e., condensable included/not included).

Company Name: Fountaintown Forge, Inc.
Address City IN Zip: 5513 South 100 East, Fountaintown, IN 46130
ID: 059-16878-00031
Reviewer: Allen R. Davidson
Date: 12/19/02

The following calculations determine the emission limit under 326 IAC 6-2-2:

0.87 / 4.5 ^ 0.16 = 0.68392 lb/MMBtu

The emission limit defaults to a maximum of 0.6 lb/MMBtu.

0.6	lb *	4.5	MMBtu *	8760	hr/yr =	11.826	ton/yr
	MMBtu		hr	2000	lb/ton		(will comply)

The following calculations determine the emission limit under 326 IAC 6-2-4:

Old boiler:	4.5	MMBtu/hr
New boiler:	12.6	MMBtu/hr
Total:	17.1	MMBtu/hr

1.09 / 17.1 ^ 0.26 = 0.52101 lb/MMBtu

0.521	lb *	17.1	MMBtu *	8760	hr/yr =	39.023	ton/yr
	MMBtu		hr	2000	lb/ton		(will comply)

The following calculations determine the emission limit under 326 IAC 6-3-2:

E = 4.1 * (0.050 ^ 0.67) = 0.551 lb/hr (will comply)

0.55 lb/hr * 8760 hr/yr / 2000 lb/ton = 2.41 ton/yr